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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/827,865 | 04/06/2001 | Geetha Srikantan | SUN-P4966-MDL | 6074 |

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| EXAMINER | |
|---|---|
| SHELTON, BRIAN K | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2611 | 7 |

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/827,865 | SRIKANTAN ET AL. | |
| | Examiner | Art Unit | |
| | Brian Shelton | 2611 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *9 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *8-15 and 17-20* is/are allowed.

6)☒ Claim(s) *1-4,6 and 16* is/are rejected.

7)☒ Claim(s) *5 and 7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. This Action is in response to Applicants' Amendment dated 9 January 2004.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 4, 6, and 16** are rejected under 35 U.S.C. 102(b) as being anticipated by Rangan et al., "Feedback Techniques for Continuity and Synchronization in Multimedia Information Retrieval," ACM Transactions on Information Systems, Vol. 13, No. 2, April 1995, pages 145-176 (hereinafter "Rangan").

Regarding **claims 1 and 16**, Rangan discloses a method and corresponding machine readable program storage medium for synchronizing a media stream (pages 157-169), comprising:

(a) streaming media from a media program from a server to a client (page 159 at lines 11-20, describing server transmission of media program comprised of master and slave streams; see page 170 at lines 24-26, describing audio as the master stream and video as the slave stream);

(b) at the server, detecting a loss of synchronization in said media stream at a current media time index (page 159 at lines 21-39; describing server detection of playback asynchronism between master and slave streams, where the "current time index" is the media unit corresponding to the present playback position (e.g., current time) of the slave stream at the client; see also page 148 at lines 39-43, describing media units as atomic units of playback);

(c) at the server, selecting a second media time index later in same media than said current media time index (page 160 at lines 13-24, describing procedure wherein server deletes frames of slave stream prior to transmission, which results in playback position of the slave stream (i.e., current media time index) being synchronized to the playback position of the master stream (i.e., second time index). The instruction to omit selected slave media units from the lagging slave media stream inherently discloses the selection of a second media time index, wherein the second media time index corresponds to the playback position (i.e., media time) of the master stream); and

(d) attempting to synchronize said media at said second media time index (page 160 at lines 17-21, transmission by server of slave stream at newly selected playback position corresponding to the second time index (e.g., slave time index is synchronized with master time index); see also page 166 at lines 5-9, discussing periodic resynchronizations).

As for **claim 4**, Rangan discloses a method of synchronizing a media stream (as discussed above relative to claim 1) wherein detecting comprises:

(a) identifying a current time index of the media program, wherein said current time index corresponds to media that should be streamed at said current time index (page 159 at lines 22-39; describing server detection of playback asynchronism between master and slave streams, where the "current time index" is the media unit corresponding to the present playback position (e.g., current time) of the slave stream at the client); and

(b) comparing said current time index to a time index of said media actually being streamed (page 160 at lines 13-21, describing determination of degree of asynchronism and instruction to drop a number of media units corresponding to the asynchronism).

As for **claim 6**, Rangan discloses a method of synchronizing a media stream (as discussed above relative to claim 4) wherein said selecting a second time index comprises adding a predetermined amount of time to said time index of said media actually being streamed (page 160 at lines 17-21, describing the server skipping a number of media units corresponding to time value of the asynchronism between the slave and master streams, thereby advancing in time (e.g., adding predetermined amount of time) within the slave stream prior to transmission).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 2 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rangan.

As for **claim 2**, the examiner takes Official Notice that it is typical in many procedures to repeat the steps which comprise a procedure upon the failure of the procedure for the advantage of correcting errors to produce a successful procedure. Repeating procedural steps upon failure is observed in conventional systems as common as a typical fax machine. For instance, when a user attempts to send a document via a fax machine and the receiving fax machine is busy, the sending fax will repeat the procedure of attempting to connect with the receiving fax. The concept of repeating procedural steps upon failure is even so ubiquitous as to be observed in everyday tasks such as starting one's automobile, wherein a driver will repeat the procedural steps upon failure of the engine to achieve ignition.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Rangan to repeat any procedure

that fails, such as attempting to synchronize, for the typical advantage of correcting errors to produce a successful procedure.

As for **claim 3**, the examiner takes Official Notice that after making several attempts to correct a failed procedure it is typical to quit or terminate the procedure for the advantage of preventing a media program with an unacceptable signal quality level from being transmitted. This is particularly observed in broadcasting applications, where broadcasters will terminate a media program when visual distortion, due to such effects as jitter, noise, and signal loss, result in a degradation of program quality below an acceptable level.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Rangan to terminate the process if a predetermined number of attempts to resynchronize are unsuccessful for the typical advantage of preventing a media program with an unacceptable signal quality level from being transmitted

***Response to Arguments***

6. Applicant's arguments, see Amendment, filed 9 January 2004, (hereinafter "Amendment") with respect to claims 8-15 and 17-20 have been fully considered and are persuasive as to Applicants' contentions that Ehley fails to disclose: 1) the loss of synchronization being detected at the server (Amendment at pages 8-11), and 2) halting

the streaming of a media program (Amendment at page 10). The rejection of claims 8-15 and 17-20 has therefore been withdrawn.

7. Applicant's arguments with respect to claims 1-7 and 16 have been considered but are moot in view of the new ground(s) of rejection.

8. Furthermore, to the extent that the skipping or deleting of media units to regain the synchronization of a lagging stream to a reference stream as relied upon in the above rejection of claims 1-4, 6 and 16 may be considered similar to the "frame dropping" which Applicants' contend is not equivalent to the claimed limitation of selecting a media time index (see Amendment at pages 9 and10), Applicants are referred to the explanation of the index selection process wherein Applicants state, "...the media streaming *server opts to drop or ignore data corresponding to the media time* between the current and future time indices." (Application, dated 6 April 2001, page 21, at lines 6-8) (emphasis added). Moreover, the selection of a point within a media stream, wherein the stream is comprised of media units, inherently discloses the selection of a corresponding time position (i.e., time index) of that stream. Accordingly, Applicant's argument regarding the "frame dropping" relied upon in the previous Ehley rejection, to the extent the argument may be considered relevant to the present rejection based upon Rangan, is deemed unconvincing.

***Allowable Subject Matter***

9. Claims 8-15 and 17-20 are allowed for the reasons stated above.

10. Claims 5 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dockter, et al. (Dockter), U.S. Patent No. 5,420,801 discloses synchronization of multiple media process in a computer system according to a common timebase, wherein processes resynchronize by sleeping, compressing, truncating, deleting, or elongating according to a comparison between to process time and the common timebase (abstract, col. 3, lines 26-64).

Biersack, et al., "Intra- and Inter-Stream Synchronisation for Stored Multimedia Streams," IEEE Int'l. Conference on Multimedia Computing & Systems, June 17-23, 1996, pages 372-381, discloses a receiver based buffer-level synchronization control scheme wherein a receiver determines a degree of asynchronism and transmits an equivalent offset value to a stream server requesting the server to either skip or pause for a predetermined number of media units (pages 377-379).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Shelton whose telephone number is (703) 305-8714. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian Shelton
Examiner
Art Unit 2611

BS

CHRIS GRANT
PRIMARY EXAMINER